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Boston, Concord +
Montreal railroad--
Managers, Board of
Statistical report
... [1845]

STATISTICAL REPORT

OF THE

Boston, Concord & Montreal Railroad,

FROM

CONCORD TO HAVERHILL, N. H.

BY THE BOARD OF MANAGERS.

MEREDITH BRIDGE, N. H.
Belknap Gazette Press,

Engineer's Statement.

The undersigned having completed the final survey of the BOSTON, CONCORD & MONTREAL RAILROAD, from Concord to Haverhill, N. H., but not having completed his estimates, is enabled at present to accompany the Map of the Road with only this brief statement. I commenced the survey at Concord on the 10th of March last, with directions from the Board of Managers to find the best possible location for the road, and to make the survey final, ready to locate and contract upon. I have followed these directions; and shall be able ere long, from the survey which I have made, to present to the Board, full and minute estimates of the expense of construction, with Profile, and every thing necessary to be had before contracting and breaking ground.

I may be permitted to refer to the accompanying plan as exhibiting the location of the road; and would add, that I consider the route as very feasible, with an unusually small proportion of heavy grades and very little rock cutting.

In Meredith there will be about two miles of 45 feet grade to the mile—in New Hampton and Holderness about three miles, and in Wentworth and Warren about six miles of the same grade. In Warren there will be three miles of 52,80 feet to the mile; and in Benton and Haverhill about seven miles of 45 feet to the mile. All the rest of the road will be level, or gently undulating, in no case exceeding 39,60 feet grade to the mile. The distance from the Depot, in Concord, to Haverhill, is 84 miles. The curvatures are not objectionable, there being but few of less than 1910 feet radius.

From the estimates which I have made, and the view which I now have of the subject, I am of the opinion that the grading of this road will compare favorably with that of the Fitchburg road in Massachusetts. I think the whole expense of constructing and furnishing the road will not vary much from \$20,000 per mile. Should Railroad Iron recede to its former price, so that the superstructure will cost as formerly about seven thousand dollars per mile, the whole expense may probably fall considerably short of that sum—not much if any exceeding in the whole fifteen hundred thousand dollars.

Lumber of all kinds wanted for the construction of the road, as well as for bridges, depots, &c., abounds upon the line, and may be had at reasonable prices. Good granite for masonry and all the materials for graduation will be easy of access and can be procured at low rates.

July 23, 1845.

WILLIAM P. CROCKER, *Engineer.*

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Statistical Report.

The board of managers of this corporation, having in view the construction of a railroad from Concord, N. H., to the Connecticut River, at Haverhill, in submitting the foregoing report of the Engineer, beg leave to add the following facts exhibiting the business resources of the country, and its capacity to support the road when constructed.

There are sixty-eight towns in New Hampshire upon, or tributary to, this road; and three and a half counties in Vermont. These towns in New Hampshire embrace, as will be seen by the following tables, a fourth part of the valuation and population of the state—those in Vermont are among the best and most productive in that state.

The location of this road, as will be seen by the accompanying plan, is in the valley of the Merrimack, Winnipisiogee, Pemigewasset, Baker's and Oliverian Rivers; and from the peculiar localities of the country, it is entirely free from the danger of competing routes—it will be, like the streams and lakes upon which it is located, fed by branches falling into it from among the thousand hills; but the main channel can never be disturbed nor the natural current of business diverted from it.

The following statistics have been compiled from authentic sources and may be relied on as correct.

List of towns in New Hampshire on, and tributary to, the BOSTON, CONCORD & MONTREAL RAILROAD, with the population of each, taken from the Census of 1840, and the total valuation of each town as returned to the office of Secretary of State as the basis of public taxes for the year 1844.

	Inventory, 1844	Population, 1840
Canterbury,	530,036	1643
Northfield,	392,261	1413
Sandbornton,	789,674	2745
Gilmanton,	942,396	3485
Gilford,	388,116	2072
Meredith,	801,976	3344
New Hampton,	404,199	1812
Holderness,	378,128	1528

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Commerce,

Centre Harbor,	126,496	584
Alton,	538,325	2002
Wolfborough,	472,363	1918
Tuftonborough,	317,762	1281
Moultonborough,	320,604	1752
Sandwich,	480,974	2625
Tamworth,	289,789	1716
Eaton,	249,279	1710
Conway,	376,415	1811
Freedom,	138,459	926
Effingham,	198,106	1195
Ossipee,	478,514	2170
Chatham,	91,231	406
Albany,	40,247	523
Bridgewater,	145,472	747
Plymouth,	317,128	1282
Rumney,	280,614	1110
Wentworth,	275,571	1119
Warren,	186,703	938
Benton,	86,291	413
Haverhill,	739,966	2675
Orford,	616,616	1707
Piermont,	312,889	1057
Thornton,	224,388	1045
Woodstock,	79,629	472
Bath,	441,406	1591
Lisbon,	411,197	1682
Landaff,	233,707	957
Littleton,	407,541	1778
Franconia,	144,542	523
Bethlehem,	178,692	779
Lyman,	359,284	1496
Dorchester,	143,360	769
Groton,	162,846	870
Ellsworth,	27,286	300
Hebron,	122,398	508
Campton,	322,446	1513
Bartlett,	141,933	706
Carroll,	64,333	218
Colebrook,	148,763	743
Columbia,	112,279	620
Dalton,	131,603	664
Gorham,	32,402	156
Jackson,	100,999	584
Jefferson,	105,832	575
Lancaster,	347,712	1316
Milan,	55,342	386
Pittsburg,	45,313	19
Stewartstown,	128,824	630
Stratford,	124,068	441
Whitefield,	171,121	751
Berlin,	37,202	116
Erroll,	31,982	104
Northumberland,	105,360	299

Randolph,	23,441	115
Stark,	63,552	349
Shelburne,	84,810	350
Hart's Location,	3,666	44
Clarksville,	27,482	88
Total,	<u>\$17,123,341</u>	<u>73,457</u>

State of New Hampshire.

SECRETARY OF STATE'S OFFICE.

 * * * * *
 * L. S. *
 * * * * *

I do hereby certify, the foregoing to be the amount of the Inventories of the several towns named in the preceeding list for the year 1844, as the same were returned to this office by the Selectmen of said towns and published by order of the Legislature of this State.

I further certify, that from the abstract of the amount of Inventories published by order of the Legislature, it appears that the total amount of Inventories received from the several towns and places in this State for the year 1844, (not including the Polls) was \$72,156,937.75.

Given under my hand and the Seal of said State, this 11th day of June, A.D. 1845.

THOMAS P. TREADWELL,
Secretary of State.

Counties in Vermont whose business centres in at Haverhill, with the valuation and population of each.

	Valuation.	Population.
Caledonia	4,727,563.08	21,891
Essex	668,480.40	4,226
Orleans	2,134,096.15	13,634
Half of Orange	3,246,804.59	18,936
	<u>10,776,944.59</u>	<u>58,687</u>
68 towns in N. H.	17,123,441.00	74,483
	<u>\$27,900,385.59</u>	<u>133,170</u>

Towns in New Hampshire, with the present annual tonnage of each and the price per ton paid for the same to and from Concord, with the gross amount paid for freight to and from all places.

	Tonnage	Price to Concord	Total
Canterbury	525	2.00	2,625,

	Tonnage	Price to Concord	Total
Northfield	412	3,00	2,520
Sandbornton	1250	4,00	8,750
Gilmanton	1100	4,00	7,700
Gilford	1500	5,00	12,000
Meredith	2700	5,00	21,600
New Hampton	550	5,00	4,400
Holderness	750	6,50	7,125
Centre Harbor	250	5,00	2,250
Alton	540	6,00	5,130
Wolfborough	500	6,00	4,750
Tuftsborough	500	6,00	4,500
Moultonborough	450	6,00	4,050
*Sandwich	625	8,00	7,500
*Tamworth	450	10,00	4,500
*Eaton	450	11,00	4,950
*Conway	875	12,00	8,750
*Freedom	250	12,00	2,500
*Effingham	300	12,00	3,000
*Ossipee	482	10,00	4,820
*Chatham	100	12,00	1,200
*Albany	125	12,00	1,500
Bridgewater	175	7,50	1,827
Plymouth	425	8,00	4,675
Rumney	284	8,50	3,266
Wentworth	300	9,00	3,600
Warren	355	10,00	4,615
Benton	100	12,00	1,500
Haverhill	2500	13,50	41,250
Orford	750	9,50	9,375
Piermont	350	10,00	4,550
Thornton	225	8,00	2,475
Woodstock	150	10,00	1,950
Bath	450	14,00	7,650
Lisbon	350	15,00	6,300
Landaff	175	15,00	3,150
Littleton	450	15,00	8,100
Franconia	300	12,50	4,650
Bethlehem	140	14,00	2,380
Lyman	432	20,00	9,936
Dorchester	170	8,00	1,870
Groton	192	8,00	2,112
Ellsworth	75	10,00	,975
Hebron	125	8,00	1,375
Campton	350	10,00	4,550
Coos County (26 towns)	4,000	17,00	8,000
3 1-2 Co's. in Vermont	25,000	20,00	575,000

52,507

\$841,251

*These towns at present do most of their heavy business with Portland.

Add to the amount paid for tonnage the sum paid for fare, and we have a grand total of more than one million of dollars.

Table exhibiting some of the principal products of sixty-eight towns in New Hampshire, from the official census of 1840.

	No. of Horses	Cattle	Sheep	Cereal grains	Potatoes
Canterbury	259	1748	4609	25,249	45213
Northfield	237	1467	3312	22,107	25633
Sandbornton	461	3566	7822	32,648	56230
Gilmanton	497	4596	7635	41,296	84608
Gilford	233	2111	4723	17,621	58825
Meredith	442	3332	6859	28,979	66279
New Hampton	235	2117	4417	18,264	41944
Holderness	231	2117	4278	28,267	36891
Center Harbor	111	853	1534	7,356	16591
Alton	289	2597	4379	22,844	56063
Wolfborough	329	2352	3858	21,350	55360
Tuostonborough	189	1849	2110	17,547	38700
Moultonborough	223	1889	2112	19,837	31606
Sandwich	436	3131	4868	23,646	67459
Tamworth	246	1626	2187	15,113	35791
Eaton	181	1324	1498	10,125	29874
Conway	233	1642	1852	18,818	41753
Freedom	155	1178	1575	9,058	22625
Effingham	198	1007	1125	11,950	26848
Ossipee	257	1616	1658	16,152	44755
Chatham	114	463	526	6,072	13835
Albany	92	257	249	3,151	9647
Bridgewater	144	734	1093	11,962	20852
Plymouth	232	1485	3409	19,341	26087
Rumney	338	1342	1845	20,637	25904
Wentworth	227	1520	2653	16,726	30678
Warren	209	1277	1975	15,532	38394
Benton	102	587	1971	6,555	16688
Haverhill	595	4440	11882	30,360	65924
Orford	339	2304	8979	31,865	62117
Piermont	278	1581	7381	27,676	32715
Thornton	238	1406	2219	19,477	33864
Woodstock	67	421	481	4,719	18623
Bath	499	2527	9154	47,204	70492
Lisbon	376	2062	5116	29,124	46159
Landaff	277	1650	3948	23,106	35297
Littleton	331	1791	6170	22,522	38203
Franconia	182	533	940	8,121	18295
Bethlehem	186	839	1154	12,708	33251
Lyman	365	2217	7863	30,191	41960
Dorchester	168	1008	3126	7,546	32786
Groton	173	1155	2508	10,146	26211
Ellsworth	43	243	725	2,374	8580
Hebron	101	784	2037	6,705	10850
Campton	284	1495	4181	20,762	35257
Ssee County	2,307	11,334	21092	168,870	432521
	13,915	87,581	185,083	1,016,619	2,128,129

TABLE exhibiting the present number of passengers on the different lines of stages over the roads embraced in the foregoing towns.

Over the Grafton Turnpike	4600
Over the Bristol Road	6000
Over the Sandbornton Road	6000
Over the Meredith road	5000
Over the Sandwich, Moultonborough &c.	4250
Over the Eaton, Conway &c.	6000
Over other small Routes	2500

34350

The passengers over the Grafton Turnpike would mostly take the Railroad at Haverhill—those over the Bristol and Sandbornton roads at Haverhill, Rumney, Plymouth &c. Those over the Meredith, Sandwich and Eaton roads, at Meredith Village &c. The Sandwich and Moultonborough, and the Eaton and Conway lines now run to Dover.

From the foregoing tables, and an examination of the accompanying plan, it will be seen that the present amount of business of the towns upon, and tributary to, this line of railroad is sufficient to insure an immediate and ample return of profits upon the investment. But experience has proved that railroads need not rely wholly upon the amount of business transacted *before* their construction, for support. There are certain rates of increase which have always followed the opening of railroads; and we feel confident that the increase of business upon the opening of this road will range as high as it has upon any of the numerous roads that have been constructed. We come to this conclusion from a consideration of the following among other facts.

Prospective increase of business.

It will be noticed that this is emphatically a *water route*. The Winnipissiogee River has been estimated by actual survey to afford a convenient and safe water-power sufficient to sustain full seventy-five thousand inhabitants.—Water-power is found all along the line in great abundance. This power, with railroad facilities, would be gradually brought into use, and a corresponding increase of business would be the result. But there are other considerations which would give a more immediate increase of business.

The Winnipissiogee Lake, which is about twenty-five miles in length, is surrounded by towns as fertile as any in the state; and abounding in lumber of various kinds, as well as in the products of the soil. The business of all

those towns, upon the north, east, and south sides of the lake would be changed from its present direction, cross the lake, and pass off over this road.

The White Mountains, Franconia Notch, Red Hill, at Center Harbor, and the variety of natural scenery which this section of our state presents, it is well known, have become objects of great attraction, and are visited by many thousands of people from all parts of our country. Railroad facilities into these mountain regions, would undoubtedly increase very much this kind of travel—many suppose it would double in a single year. It would be difficult to imagine a more beautifully romantic excursion than this would afford, leaving the railroad at the head of the lake, Meredith Village, passing to Centre Harbor, which is a place of great resort, being in the vicinity of Red Hill, thence, passing up the south-east side of the White Mountains, through the Notch to the Hotels upon the west side. Then visiting the Franconia Notch, the Flume, the “old man of the Mountain,” and passing out, striking the railroad again at Plymouth; or, passing down the Amonoosuck, into the valley of the Connecticut at Haverhill. The quantity of this Mountain travel is not easily estimated; but, from the present amount, it may be set down as a no inconsiderable item in the business of railroad intercourse.

Lime.

This article of universal consumption, is found at Haverhill, contiguous to the track of the railroad; and, according to Dr. Jackson’s Geological Report, of superior quality—better than the best of Thomaston, and as inexhaustable as the Mountains of which it is composed. Lime is produced here to a limited extent—being carted off for the supply of the surrounding country, some as far down as Holderness. Wood, which is an important item in the production of Lime, is worth at this place little more than the cutting, while at Thomaston it is worth three dollars per cord. There can be no doubt that lime would be furnished for our entire consumption as far down as Nashua, if it would not compete successfully for the Lowell and Boston markets. Let the demand be opened, and the supply would be at once equal to it; and this item alone would furnish many thousand tons of freight annually.

Lime stone is also found in Lisbon and various other places. Of the lime in Haverhill, Dr. Jackson, in his Geological report, says, “This bed of limestone is of in calculable importance to the people of New Hampshire,

and will save an immense sum from expenditure for foreign lime. The present known limits of the bed are evidently far short of its real extent, but enough is already exposed to furnish a constant supply for ages. The whole width cannot be less than 400 feet, and its length, as at present seen, is 800 feet; but it reaches in a linear direction, to an unknown extent, such wide beds rarely narrowing, when traced even for the distance of miles. The natural drainage is such that it is easy to quarry the rock to the depth of 25 or 30 feet, without the aid from pumps or syphons, so that the situation in this respect is favorable for working."

Iron Ore.

Iron Ore, of the best quality, is found in this vicinity and waits only for railroad facilities to be brought into extensive use. Large quantities of it are now carted off, to be used for various mechanical purposes. At Franconia, the Iron Works which have long been in operation, are crippled and kept down for want of means to reach a market. A revival of business here and a consequent increase would at once follow the opening of a railroad. Iron Ore is also found and extensively worked at Troy, in Orleans county, Vermont. All that is needed to insure the working of this ore upon a large scale is railroad facilities for transportation. Iron is also found in various other places, as is also zink and copper. This road may be said emphatically to penetrate the iron and mineral region of New England.

Of the iron ore in Piermont, which is within a mile and a half of the line, Dr. Jackson, in his Geological report says, "The Piermont iron mine is favorably situated for advantageous operations in the manufacture of iron. The ore is abundant and the mine will need no artificial drainage. Water power is close at hand, and is unoccupied at present. Charcoal may be had, in any desired quantity, for three or four dollars per 100 bushels. Limestone occurs in abundance near by, in Haverhill. Stone, proper for the construction of a blast furnace, is found in the immediate vicinity."

A cheap strap-railway may be constructed upon a gently inclined plane, from the ore to the railroad track, and in the same way from the lime works, upon the other side of the railroad, so that the whole of the freight from these works may be conducted to the main track without any expense for motive power, other than a horse to move the empty cars up the inclined plane.

Wood.

The vast quantities of wood in the country surrounding the lake and bays, and indeed upon the whole line of the road, must furnish an important article of transportation. Hard wood is carried from Concord to Boston, at \$2,75 per cord. Allowing at the same rate, \$4,00 per cord, from Winnipissiogee Lake to Boston, or \$3,50 to Lowell, would afford to the owners such compensation as to induce a large supply ; and there can be no doubt that very large quantities of this article would pass over the road every year. Hardwood, upon the shore of the lake, is nominally worth \$1,25 ; but the demand is limited and but little account is made of the article compared with the supply. Let there be a demand for it and the supply would be increased to a very large amount.

Lumber.

The remaining lumber of New Hampshire, may be said to be mainly upon this line of railroad. The Lake region, the Pemigewassett, Baker's, Oliverian, Connecticut above Haverhill to its source, and all its tributaries, afford Lumber of various kinds and in great quantities. At the outlet of the Lake, lumber, such as boards, shingles, joist, staves, &c. are manufactured and carted off to Concord. A railroad would render this business extensive. There is now lying upon the banks of the Pemigewassett, above Plymouth, more than 5,000,000 of ash, spruce and pine lumber,, every stick of which would go over this road were it now in operation, and must go over it when it is completed, unless a better *run of water* shall be had before that time, than has occurred the present season, Ash, maple, spruce, pine and oak lumber abound on the whole length of this road, and would immediately become an article of very extensive transportation. At Haverhill, Newbury, Bath and Wells River, very large quantities, of lumber of superior quality are rafted, to go down the Connecticut to Hartford, &c Individuals in the business pay out fifty, thirty and twenty-five thousand dollars each for tolls and other expenses in taking their lumber down the river in a single year. More than 10,000,000 of pine boards and shingles passed down the river the present season. The opening of this railroad would invite to a new market at Concord, Manchester, Nashua, Lowell and Boston, a portion at least of this lumber. As railroad transportation is preferred for lumber, especially of the better qualities, it is fair to presume that a large portion

of this lumber would go over the railroad, and from this item a large increase of business may be anticipated.

Productions of the Soil.

Passumpsic Valley, in Vermont, which naturally empties its resources into this road at Haverhill, is not surpassed by any section of New England, in fertility of soil or abundance of products. Oats, potatoes, butter, cheese, pork, potash, and all the various resources of a rich farming community, are found here in great abundance; but they are now transported by teams through "Dixville Notch" and over other roads to Portland, to Burlington, and in various other directions to the amount of more than one half of the whole surplus. The opening of this road would change the direction of all this; and, affording a promise of reward, would stimulate an increase of products, and a corresponding increase of business, almost incalculable. Open the means of transportation so that potatoes could be sent to Boston for twelve cents a bushel, and oats for six cents, and this section of Vermont it is believed would furnish of these two articles alone, more than twenty thousand tons per annum. Caledonia county alone produced in 1840, 1,066,848 bushels of potatoes and 342,433 bushels oats; and larger quantities of all the products of the soil than any other county of equal population in the United States.

From a careful examination of the whole subject we are satisfied that the following estimate of the expenditures and earnings of this road, may be relied on as being within bounds, on the opening of the road, with the annual increase usual in such cases. It is perhaps not out of place for us to say, however, before coming to this estimate, that an extension of this road up the valley of the Passumpsic is in contemplation as a matter of no distant day, and eventually to connect with the St. Lawrence and Atlantic Railroad at Stanstead, should that road not find a better connection with the seaboard, through the "Dixville Notch" to Portland. It will be noticed, however, that we have not based our calculations upon either of these contingencies for present income, nor have we taken into the account the prospective increase of business with Canada, which the construction of this road would induce, even before it should be extended beyond Haverhill.

Estimation.

68,000 tons transportation, average \$3,00	204,000,00
46,000 Passengers, average \$2,00	92,000,00
	<hr/>
	\$296,000,00
Cost of working the Road \$1,000 per mile	84,000,00
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Net earnings of the road,	212,000,00

We have summed up the foregoing conclusions and estimates, from facts and information upon which we rely with the utmost confidence and into which we invite the closest scrutiny.

The charter allows the stock-holders to divide *ten per cent* upon the capital invested. The favorable grades and cheapness of construction which are presented by the Engineer's Report, warrant us in saying that capital invested here is sure of receiving a liberal reward.

JOSIAH QUINCY
ZENAS CLEMENT *A.*
WOODBURY MELCHER
R. G. LEWIS
W. W. RUSSELL

W. D. McQUESTEN
JOHN PAGE
A. UNDERWOOD
CHARLES LANE.

July 23, 1845.

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Explanatory Law.

AN ACT in addition to and explanatory of an act entitled "An act to render railroad corporations public in certain cases and establishing a board of railroad commissioners."

SECTION 1. *Be it enacted by the Senate and House of Representatives in General Court convened,* When any route for a railroad shall have received the sanction of the railroad commissioners and the approval of the Governor and Council, it shall be lawful for the commissioners on application to them for that purpose by the corporation, to lay out the same at different and successive times, in such parts as shall be deemed by such commissioners conducive to the interests of all concerned, and in conjunction with the county road commissioners of the county or counties in which such part of the road so laid out at any time, shall lie, to assess the damages to the land owners on such part of said route; and when such corporation shall have complied with all the requirements of law in relation to such portion of the route so laid out, a lease shall be granted of such portion, in the same manner as is provided by law for the whole route when laid entire.

SEC. 2. When a portion of a route has been laid and damages assessed, as provided in the preceeding section, the notices to the land-owners and selectmen, signed by the chairman of the railroad commissioners, setting forth the time and place of commencing such laying out and the extent of the route to be laid, and being in other respects conformable to the act to which this is in addition, shall be sufficient to all land owners on so much of the route as shall be therein described,

SEC. 3. Releases from land owners of the damages awarded to them, filed with the State Treasurer, shall be received by him instead of the money required to be deposited on account of such land owners, and the corporation shall be only required to deposit from time to time, with the Treasurer the damages awarded to land owners on so much of the route as shall have been laid out aforesaid, for which releases shall not be filed as aforesaid.

SEC. 4. The corporation shall not enter on any land to construct a railroad thereon, until the damages assessed to the owner thereof shall have been paid or tendered, except in the cases mentioned in the second section of the fifty-second chapter of the Revised Statutes; and no person shall be entitled to an action for such damages until after such entry shall have been made on his land: *Provided*, that in case an appeal shall be taken from the decision of the commissioners, the corporation may, on giving or tendering to the land owner security to the satisfaction of the road commissioners for the county, that they will pay such damages and costs as may be adjudged against them in such appeal, immediately enter on the land to construct a railroad as aforesaid.

SEC. 5. In the fourth section of the act to which this act is in addition, the words "road laid out" shall be taken and held to mean "route surveyed;" so that the commissioners in their report to the Governor and Council, instead of describing the road laid out, shall describe the route surveyed.

SEC. 6. Whenever any railroad corporation shall have adopted the provisions of the act which this is in addition, and shall forward notice thereof to the Secretary of State for publication, as required by said act, said corporation shall deposit with the State Treasurer a sum sufficient to defray the expense of such publication, otherwise the said Secretary shall not cause such publication to be made.

SEC. 7. This act shall take effect from its passage.

Approved July 3, 1845.

Gaylord Bros.
Makers
Syracuse, N. Y.
PAT. JAN. 21, 1908

UNIVERSITY OF ILLINOIS-URBANA

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Statistical report of the Boston Concor



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